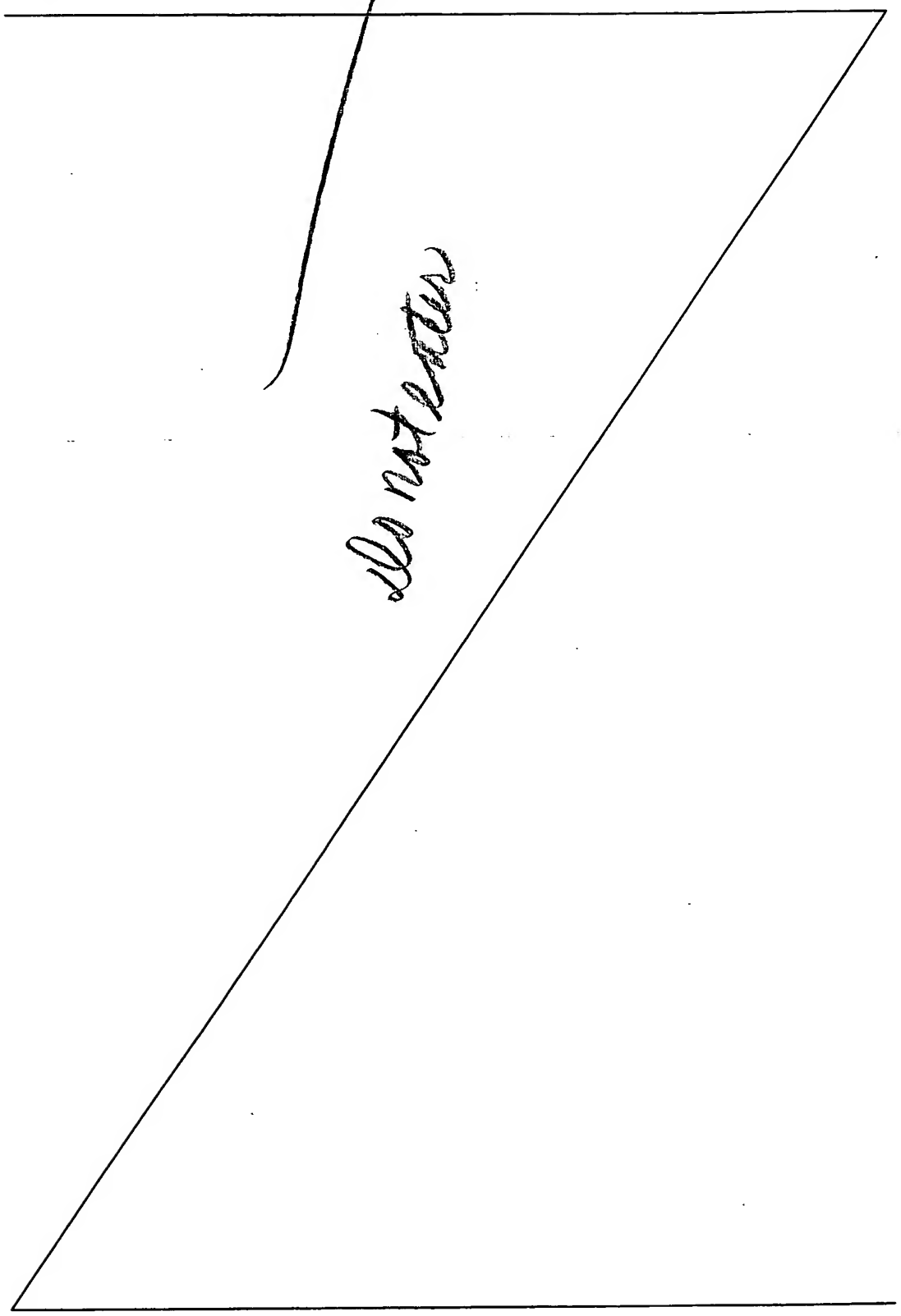
7. The sandwich sheet (2) as claimed in either of claims 5 and 6, characterized in that the sheet metal facings (1, 1') and the metal core (4) are made of steel, and the metal bonding agent (3, 3') is chosen from tin and its alloys, zinc and its alloys, and aluminum and its alloys.

8. A process for manufacturing a sandwich sheet (2), suitable for a forming and welding operation, and exhibiting excellent resistance to high temperatures, comprising two sheet metal facings (1, 1') having a melting point T_f, these being bonded together by a metal core (4) having a melting point T_c, it being possible for T_c to be equal to or different from T_f, the core (4) having a density of less than the density of each of the facings (1, 1'), characterized in that it comprises the steps consisting in:

- inserting the metal core (4) between the two sheet metal facings (1, 1') precoated on at least one of their faces with a metal coating, the melting point T_{coat} of which is below the melting point T_f of the sheet metal facing and below the melting point T_c of the metal core, such that the coated face of each of the facings (1, 1') faces the core (4);
- heating the assembly formed by the two sheet metal facings (1, 1') between which the metal core (4) has been inserted at a temperature T lying between the melting point of the metal coating T_{coat} minus 50°C and the melting point of the metal coating T_{coat} plus 200°C, under speed and duration conditions such that the core (4) adheres to each of the facings (1, 1'); and
- cooling the assembly.

9. The process as claimed in claim 8, characterized in that, between the heating and cooling steps, pressure is applied to the assembly formed by the sheet metal facings (1, 1') and the metal core (4), said

pressure being adjusted so as not to damage the structure of the metal core (4).



AMENDED SHEET